

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 29. (Canceled)

30. (Currently Amended) A purified Neural precursor cell-Expressed Developmentally Down regulated (NEDD8)-conjugating enzyme 1 (NCE1) selected from the group consisting of:

- a) a protein at least 95% identical to SEQ ID NO:4;
- b) a protein comprising a portion of SEQ ID NO:4, wherein the portion comprises at least 50 amino acids of SEQ ID NO:4; and
- c) a protein encoded by an expression element comprising a nucleic acid sequence at least 95% identical to SEQ ID NO:3,

wherein the protein ~~comprises amino acid residue 111 of SEQ ID NO:4~~ forms a thioester linkage with NEDD8.

31. (Previously Presented) The purified NEDD8-conjugating enzyme 1 according to claim 30 having an amino acid sequence comprising SEQ ID NO:4.

32. – 33. (Canceled)

34. (Withdrawn- Currently Amended) A method for identifying NCE1 binding molecules (NCE1BMs) comprising contacting purified NCE1 according to claim 30 and populations of molecules or mixed populations of molecules and determining the presence of molecules which bind specifically to NCE1.

35. (Canceled)

36. (Withdrawn) A method for determining the presence or absence and/or quantity of NCE1 or NCE1/NEDD8 complex in a biological sample, the method comprising providing a detectable NCE1BM

to a biological sample, allowing the detectable NCE1BM to bind to NCE1 according to claim 30, or NCE1/NEDD8 complex, if any is present in the biological sample, and detecting the presence or absence and/or quantity of a complex of the detectable NCE1BM and NCE1 or NCE1/NEDD8 complex.

37. (Canceled)

38. (Withdrawn) A method for identifying modulating ligands of NCE1 comprising providing NCE1BMs to an assay system for NCE1 participation in the NEDD8-activation/conjugation pathway, comprising NCE according to claim 30, and determining whether such NCE1BMs interfere with or enhance the ability of NCE1 to participate in the NEDD8-activation/conjugation pathway.

39. – 55. (Canceled)

56. (Previously Presented) A purified complex comprising NCE1 according to claim 30 and NEDD8, or a purified complex of portions thereof.

57. – 58. (Canceled)

59. (Withdrawn- Currently Amended) A dominant negative mutant of a NEDD8 conjugating enzyme 1, ~~selected from a group consisting of:~~

a) ~~— a protein at least 95% identical to SEQ ID NO:4;~~

b) ~~— a protein comprising at least a portion of SEQ ID NO:4, wherein the portion comprises at least 50 amino acids of SEQ ID NO:4; and~~

c) ~~— a protein encoded by an expression element comprising a nucleic acid sequence at least 95% identical to SEQ ID NO:3,~~

wherein the protein comprises an amino acid residue different from residue 111 of SEQ ID NO:4 and inhibits the formation of a thioester linkage between NCE1 and NEDD8.

60. (Withdrawn) The method of claim 34, wherein the population of molecules or mixed populations of molecules comprises molecules selected from the group consisting of:

- a) NAE;
- b) NEDD8; and
- c) an antibody derivative.

61. (Withdrawn) The method of claim 36, wherein the NCE1BM is an antibody derivative.

62. (Withdrawn) The method of claim 38, wherein the NCE1BM comprises molecules selected from the group consisting of:

- a) NAE; and
- b) NEDD8.

63. (Withdrawn) The method of claim 38, wherein the assay system comprises ATP.

64. (Withdrawn) The method of claim 38, wherein the method comprises determining whether the NCE1BMs interfere with the ability of NCE1 to participate in the NEDD8-activation/conjugation pathway.